

# **REMEDIATION ACTION SUMMARY REPORT**

**1438 Capitola Road  
Santa Cruz, California**

**Prepared for:**

**Jim Johnson  
199 Helen Court  
Santa Cruz, CA 95065**

**Prepared by:**

**Remediation Risk Management, Inc.  
P.O. Box 1362  
Aptos, CA 95001**

**3 October, 1994**

# REMEDIAL ACTION SUMMARY REPORT

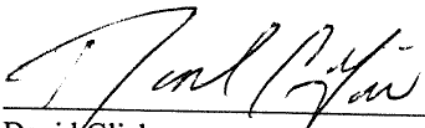
1438 Capitola Road  
Santa Cruz, California

Prepared by

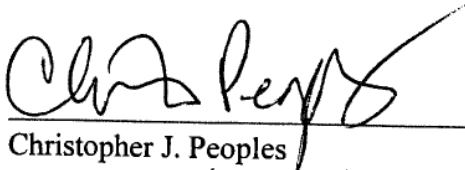
Remediation Risk Management, Inc.  
P.O. Box 1362  
Aptos, CA 95001

03 October 1994

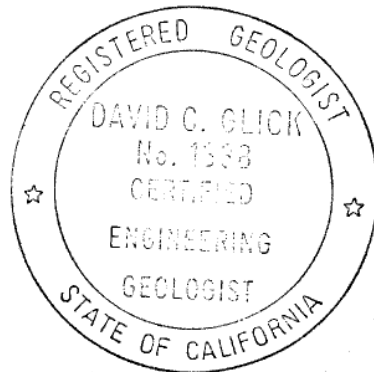
## APPROVALS:

  
\_\_\_\_\_  
David Glick  
Senior Geologist

10/5/94  
Date

  
\_\_\_\_\_  
Christopher J. Peoples  
Project Manager

10/5/94  
Date



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**REMEDIAL ACTION SUMMARY REPORT**  
**1438 CAPITOLA ROAD**  
**SANTA CRUZ, SANTA CRUZ, CALIFORNIA**

This report summarizes the procedures and findings of the soil excavation and removal work conducted at 1438 Capitola Road in Santa Cruz, California (see figure 1). All work described herein was performed on September 2 and 21, 1994 by the owner under the direct observation of Remediation Risk Management, Inc. (RRM) of Aptos, California

## **1.0 BACKGROUND INFORMATION**

### **1.1 Site Description**

The subject site is a construction and paving equipment storage yard located at 1438 Capitola Road in Santa Cruz, Santa Cruz County, California. The site is currently being used by The Road Company for the storage of heavy construction equipment and materials. According to a representative of the Road Company, the company has used the yard to store and dispense diesel fuel for its vehicles and for the storage of containers of hydraulic and motor oil for its vehicle maintenance. The main areas of concern have been referred to in the Phase I Assessment report prepared by RRM, dated June 6, 1994 (see figure 2). These areas included the storage shed area located near the southwest corner of the house, a concrete slab drum storage area located approximately 40-feet south of the storage sheds, and several dirt and asphalt areas containing surface soil staining in the heavy equipment parking area, located along the south edge of the property. As indicated in the Phase I report, a 550-gallon diesel tank and a 350-gallon motor oil tank were previously located in the Storage Shed area. The diesel tank and motor oil tank were removed in January and May, 1994, respectively.

In July 1994, RRM collected soil samples from the areas most suspect of being impacted by motor oil and/or diesel products (Storage Shed area and the heavy equipment storage area, see figure 2). Soil sample depths ranged from 6-inches to 3-feet below surface grade. Laboratory analysis results of the samples showed Total Oil and Grease (TOG) concentrations up to 3,400 parts per million (ppm) and Total Petroleum Hydrocarbons as Diesel (TPHg) up to 9.9 ppm.

## **2.0 PROJECT OBJECTIVES AND REMEDIAL WORK SCOPE**

### **2.1 Objectives**

The objective of the workscope was as follows:

1. Excavate and dispose of all soils containing petroleum hydrocarbon products.

## **2.2 Workscope**

In an effort to complete the objective as set forth above, RRM conducted the following activities:

1. Provided oversight for excavating and removal of all visually contaminated soils from the areas of concern.
2. Collected soil samples from the sidewalls and/or bottoms of each excavation, as necessary, and submitted them for laboratory analysis.

Details of these activities are presented below:

## **3.0 METHODOLOGY**

### **3.1 Soil Excavation**

A licensed backhoe operator contracted by the owner, excavated and removed soils from the previously identified impacted areas and areas where surface staining was evident. Excavation activities were supervised by an RRM staff geologist. Excavations were conducted in five areas, designated as excavations #1, #2, #3, #4, and #5 in Figure 3. Soils were scraped/and or removed from each area until there was no visual or olfactory evidence of petroleum hydrocarbon contamination. Jose DeAnda, with Santa Cruz County Environmental Health Department, inspected the site during excavation and soil sampling activities. Approximately 130 tons of contaminated soil was excavated. The soils were stockpiled on-site, and covered with visqueen sheeting. Following acceptance approval by the county of Santa Cruz the owner hauled all excavated soils to Buena Vista Sanitary landfill in Watsonville, California for disposal. The disposal receipts are provided in Appendix A. The excavations were reportedly backfilled by the client with clean fill material.

### **3.2 Soil Sampling and Analyses**

Following soil excavation activities, RRM collected confirmation soil samples from the sidewalls and bottoms of excavations #1 and #2. Confirmation soil samples were used to substantiate that the soil contamination had been effectively removed. Excavated soils were logged by a staff geologist. RRM collected 8 soil samples from excavation #1, and 3 soil samples from excavation #2. Soil samples were not collected from excavations #3, #4, and #5 because there was no visual evidence of hydrocarbon impacts beneath the surface staining. RRM also collected one composite soil sample from four different areas in the stockpile. All samples were collected and sealed in 2-inch diameter brass liners, labeled, and placed into a cooler with ice. Following the completion of field activities, the samples were transported under chain of custody documentation to Hull Developmental Labs, Inc. of San Jose, California. Samples were analyzed for Total Petroleum Hydrocarbons as Diesel (TPHD) by EPA Method 8015M, and Total Oil and

Grease (TOG) by method SM 5520F. The laboratory analyses reports and chains of custody are included in Appendix B.

#### 4.0 CONCLUSIONS

The initial excavation activities conducted on September 2, 1994 removed 130 tons of soils. However results from the soil sample collected from the west sidewall of the excavation indicated concentrations of 700 ppm as diesel were present. Additional excavation was completed at excavation #1 on September 21, 1994 to remove the remaining contamination. Additional confirmation soil samples were collected and submitted to Hull Developmental Labs.

Refer to Table 1 for a summary of the soil sample analysis results, and Figure 3 for the scaled dimensions and locations of the excavation and soil sample areas.

Soil sampling analyses indicate that the contaminated soils have been removed to non-detectable levels in the areas of concern.

## **TABLES**

**TABLE 1**  
**SUMMARY OF SOIL ANALYSIS**  
**1438 Capitola Road**  
**Santa Cruz, California**

WELL I.D.	SAMPLE DATE	TPH-Diesel (ppm)	Total Oil & Grease (ppm)
1-EAST	09/02/94	ND	ND
1-NORTH	09/02/94	ND	ND
1-SOUTH	09/02/94	ND	ND
1-WEST	09/02/94	700	ND
1-BOTTOM	09/02/94	47	ND
2-NORTH	09/02/94	ND	ND
2-SOUTH	09/02/94	ND	ND
2-EAST	09/02/94	ND	ND
1-SW	09/21/94	ND	NA
1-NW	09/21/94	ND	NA
2-BOTTOM	9/21/94	ND	NA
COMPOSITE	09/2/94	22	1,608

NOTE: TPH = Total Petroleum Hydrocarbons-as-Diesel  
ppm = Parts Per Million (mg/kg)  
ND = Not Detected  
NA = Not Analyzed



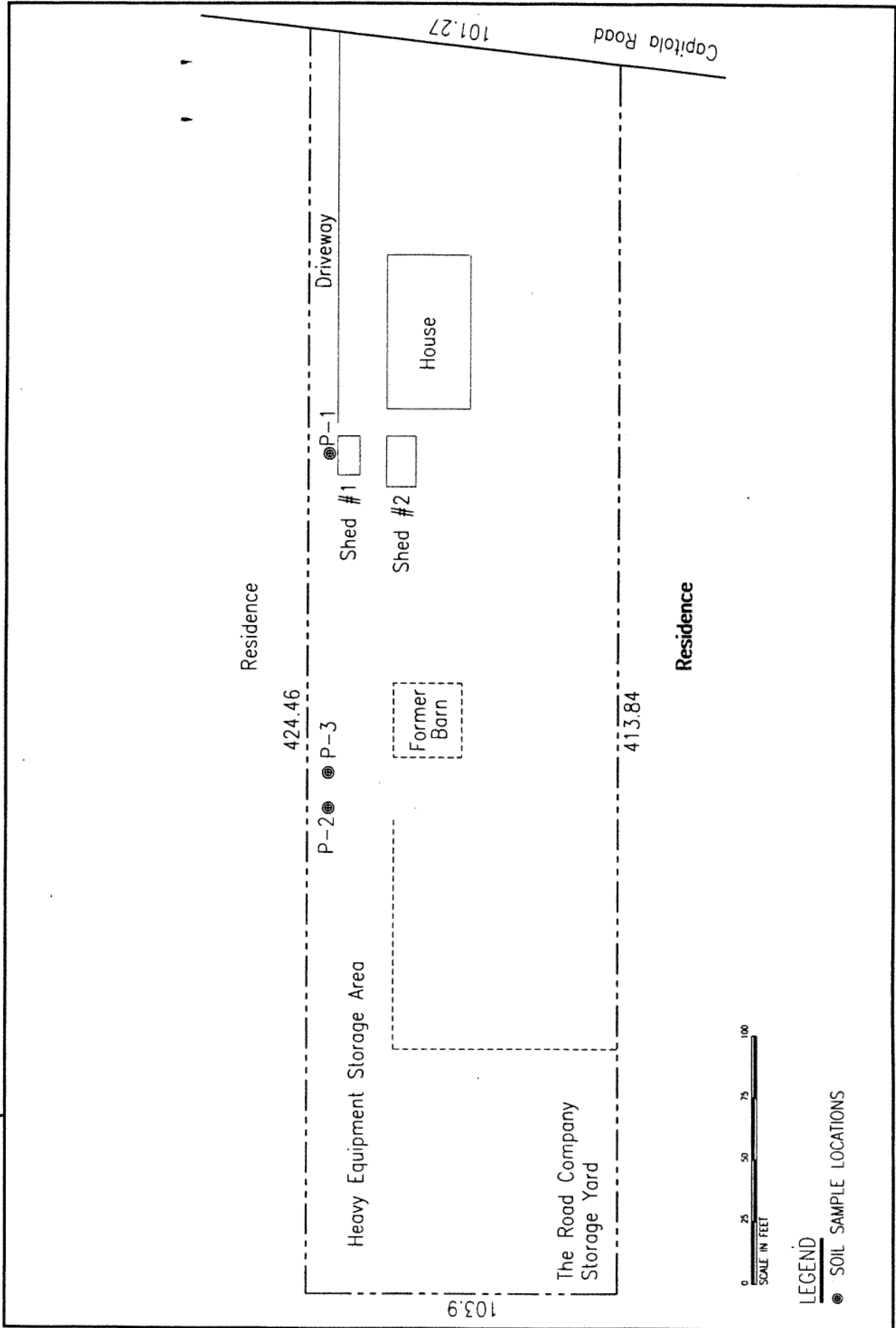
# FIGURES



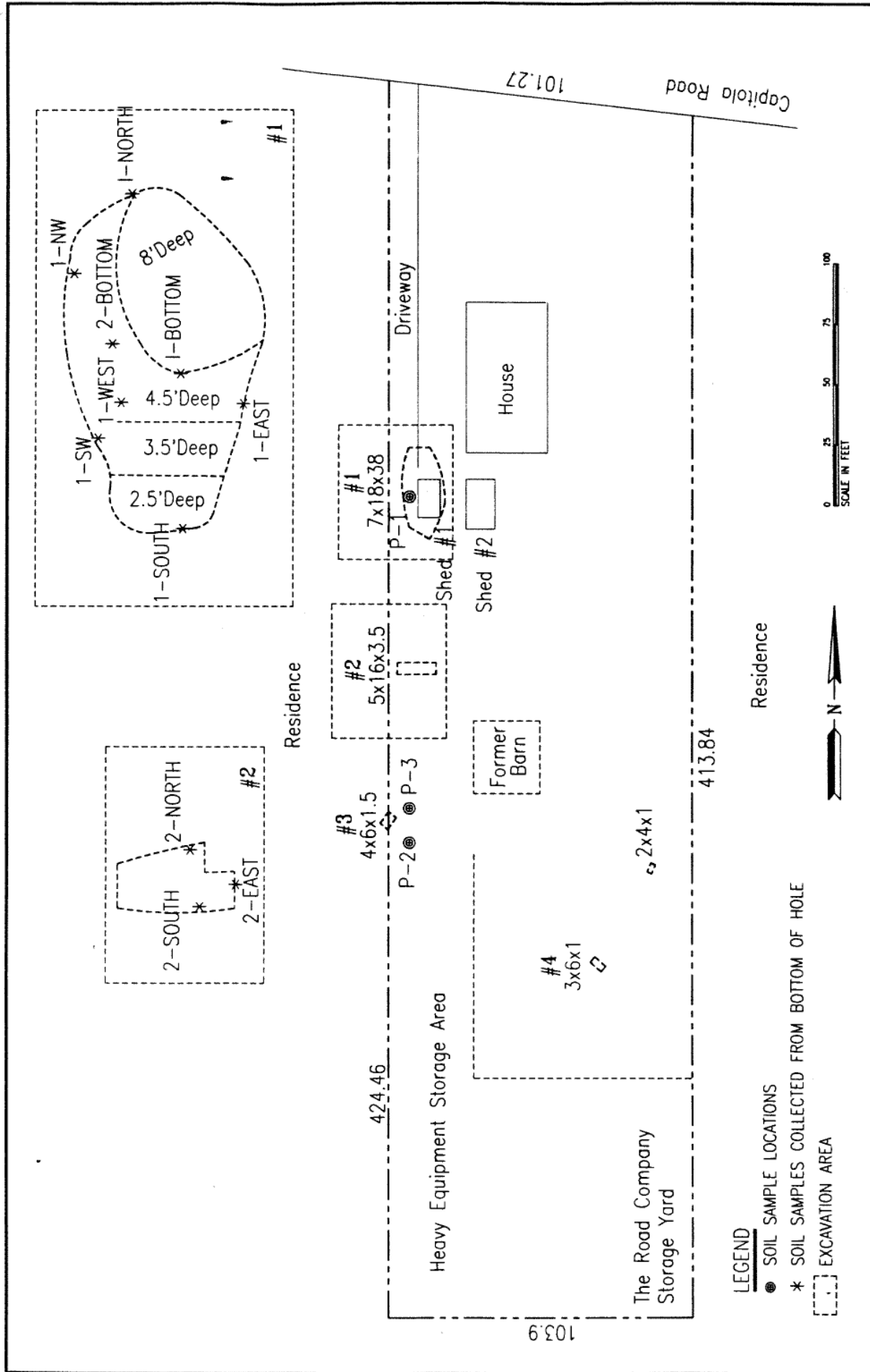
Figure 1

Generalized Site Map  
 1438 Capitola Road  
 Santa Cruz, CA

Remediation Risk Management, Inc.



EXTENDED SITE PLAN  
 1438 Capitola Road  
 Capitola, California



EXCAVATION SITE  
 1438 Capitola Road  
 Capitola, California



Remediation Risk Management, Inc.

# **Appendix A**

## **Soil Disposal Receipts**

Cnty of Santa Cruz Buena Vista  
1231 Buena Vista Dr.  
Watsonville, Ca.

Job Site  
Truck No. 5004 Box No.

TICKET NO.: 78731  
DATE: 9/22/94 12:03

ACCOUNT: 1068  
ROAD COMPANY, THE

-199 HELEN COURT

-SANTA CRUZ

, CA

Net Wt. Material  
41480 W24-GENERAL REFUSE  
Units Additional Items  
0.0  
0.0  
0.0  
0.0

Price/Unit Charge  
\$39.50 \$819.23  
\$0.00 \$0.00  
\$0.00 \$0.00  
\$0.00 \$0.00  
\$0.00 \$0.00

Grand Total: \$819.23  
Charged: \$819.23  
Change: \$0.00

71700 Gross Weight Lbs.  
30220 (M) Tare Weight Lbs.  
41480 Net Weight Lbs.

Last Tare: 9/22/94

Driver: 

ROBERT

Cnty of Santa Cruz Buena Vista  
1231 Buena Vista Dr.  
Watsonville, Ca.

Job Site  
Truck No. 5004 Box No.

TICKET NO.: 78653  
DATE: 9/22/94 10:32

ACCOUNT: 1068  
ROAD COMPANY, THE

-199 HELEN COURT

-SANTA CRUZ

, CA


Net Wt. Material  
44080 W24-GENERAL REFUSE  
Units Additional Items  
0.0  
0.0  
0.0  
0.0

Price/Unit Charge  
\$39.50 \$870.58  
\$0.00 \$0.00  
\$0.00 \$0.00  
\$0.00 \$0.00  
\$0.00 \$0.00

Grand Total: \$870.58  
Charged: \$870.58  
Change: \$0.00

74300 Gross Weight Lbs.  
30220 (M) Tare Weight Lbs.  
44080 Net Weight Lbs.

Last Tare: 9/22/94

Driver: 

KAREN

Temp #

5004

Cnty of Santa Cruz Buena Vista  
1231 Buena Vista Dr.  
Watsonville, Ca.

Job Site  
License No.: 9C41703

TICKET NO.: 78593  
DATE: 9/22/94 9:21

ACCOUNT: 1068  
ROAD COMPANY, THE

-199 HELEN COURT

-SANTA CRUZ


, CA

Net Wt. Material  
45700 W24-GENERAL REFUSE  
Units Additional Items  
0.0  
0.0  
0.0  
0.0

Price/Unit Charge  
\$39.50 \$902.58  
\$0.00 \$0.00  
\$0.00 \$0.00  
\$0.00 \$0.00  
\$0.00 \$0.00

Grand Total: \$902.58  
Charged: \$902.58  
Change: \$0.00

75920 (M) Gross Weight Lbs.  
30220 Tare Weight Lbs.

Driver: 

Cnty of Santa Cruz Buena Vista  
1231 Buena Vista Dr.  
Watsonville, Ca.  
ACCOUNT:1068

Job Site  
Truck No.5002 Box No.

TICKET NO.: 78666  
DATE: 9/22/94 10:57

ROAD COMPANY, THE

-199 HELEN COURT

-SANTA CRUZ

, CA

Net Wt.	Material	Price/Unit	Charge	Grand Total:
46700	W24-GENERAL REFUSE	\$39.50	\$922.33	\$922.33
Units	Additional Items			Charged: \$922.33
0.0		\$0.00	\$0.00	: \$0.00
0.0		\$0.00	\$0.00	Change: \$0.00
0.0		\$0.00	\$0.00	
0.0		\$0.00	\$0.00	
75240	Gross Weight Lbs.			Driver: <i>Jerry [Signature]</i>
28540 (M)	Tare Weight Lbs.		Last Tare: 9/22/94	
46700	Net Weight Lbs.			KAREN

Cnty of Santa Cruz Buena Vista  
1231 Buena Vista Dr.  
Watsonville, Ca.  
ACCOUNT:1068

Job Site  
Truck No.5002 Box No.

TICKET NO.: 78615  
DATE: 9/22/94 9:40

ROAD COMPANY, THE

-199 HELEN COURT

-SANTA CRUZ

, CA

Net Wt.	Material	Price/Unit	Charge	Grand Total:
40500	W24-GENERAL REFUSE	\$39.50	\$799.88	\$799.88
Units	Additional Items			Charged: \$799.88
0.0		\$0.00	\$0.00	: \$0.00
0.0		\$0.00	\$0.00	Change: \$0.00
0.0		\$0.00	\$0.00	
0.0		\$0.00	\$0.00	
69040	Gross Weight Lbs.			Driver: <i>Jerry [Signature]</i>
28540 (M)	Tare Weight Lbs.		Last Tare: 9/22/94	
40500	Net Weight Lbs.			ROBERT

Cnty of Santa Cruz Buena Vista  
1231 Buena Vista Dr.  
Watsonville, Ca.  
ACCOUNT:1068

Job Site  
License No.:3B63974

TICKET NO.: 78562  
DATE: 9/22/94 8:30

ROAD COMPANY, THE

-199 HELEN COURT

-SANTA CRUZ

, CA

Net Wt.	Material	Price/Unit	Charge	Grand Total:
42780	W24-GENERAL REFUSE	\$39.50	\$844.91	\$844.91
Units	Additional Items			Charged: \$844.91
0.0		\$0.00	\$0.00	: \$0.00
0.0		\$0.00	\$0.00	Change: \$0.00
0.0		\$0.00	\$0.00	
0.0		\$0.00	\$0.00	
71320 (M)	Gross Weight Lbs.			Driver: <i>Jerry [Signature]</i>
28540	Tare Weight Lbs.			
42780	Net Weight Lbs.			KAREN

5002



# Hull Development Labs, Inc.

Remediation Risk Management  
P.O. Box 1362  
Aptos, CA 95001  
Attn: Chris Peoples

Date:	9/12/94
Date Received:	9/6/94
Date Analyzed:	9/8/94
Lab #:	See Table
P.O #:	
Sampled By:	Client

## Certified Analytical Report


### Soil Sample Analysis (1438 Capitola Road):

Sample ID	Sample Date	Sample Time	Lab #	TPH-Diesel	Total Oil & Grease
#1-East	9/2/94	11:50	A5230	None detected	None detected
#1-North	9/2/94	11:50	A5231	None detected	None detected
#1-South	9/2/94	11:50	A5232	None detected	None detected
#1-West	9/2/94	11:50	A5233	700.0	None detected
#1-Bottom	9/2/94	11:50	A5234	47.0	None detected
#2-North	9/2/94	14:50	A5235	None detected	None detected
#2-South	9/2/94	14:50	A5236	None detected	None detected
#2-East	9/2/94	14:50	A5237	None detected	None detected
SP#1 & SP#2 Composite	9/2/94	15:20	A5238	22.0	1608.0

1. Analysis performed by Hull Development Labs, Inc. (CAELAP #1369)
2. Above values in mg/kg (ppm).

### Summary of Methods and Detection Limits:

	TPH-Diesel	Total Oil & Grease
Method #	EPA 8015M	SM 5520F
Units	mg/kg	mg/kg
Detection Limit	1.0 mg/kg	50.0 mg/kg

  
Michael N. Golden, Lab Director





# Hull Development Labs, Inc.

Remediation Risk Management  
P.O. Box 1362  
Aptos, CA 95001  
Attn: Chris Peoples

Date:	9/27/94
Date Received:	9/23/94
Date Analyzed:	9/26/94
Lab #:	See Table
Project:	Road Company
Sampled By:	Client

## Certified Analytical Report

### Soil Sample Analysis:

Sample ID	Sample Date	Sample Time	Lab #	TPH-Diesel
#2-Bottom	9/21/94	11:00	A5671	None detected
#1-SW	9/21/94	10:50	A5672	None detected
#1-NW	9/22/94	10:30	A5673	None detected

1. Analysis performed by Hull Development Labs, Inc. (CAELAP #1369)
2. Above values in mg/kg (ppm).

### Summary of Methods and Detection Limits:

	TPH-Diesel
Method #	EPA 8015M
Units	mg/kg
Detection Limit	1.0 mg/kg

Michael N. Golden, Lab Director

Hull Development Labs, Inc.

11409 Minnesota Ave.  
San Jose, CA 95125

QUALITY CONTROL RESULTS SUMMARY

METHOD: SM5520F

QC Sample No.: A5236  
Matrix: Soil  
Units: mg/kg

Date Analyzed:

9/8/94

PARAMETER	SA mg/kg	SR mg/kg	MS mg/kg	MSD PR	MSD mg/kg	MSD PR	RPD	QC LIMITS RPD	PR
Oil & Grease	100	0	95	95	110	110	15%	25	70-130

LAB DIRECTOR:

  
M. Golden

HULL DEVELOPMENT LABS INC.

1149 Minnesota ave  
San Jose. CA 95125

QUALITY CONTROL RESULTS SUMMARY  
FOR DIESEL ANALYSIS

DIESEL  
QC sample No.: BLANK SPIKE & DUP      Date analyzed: 09-07-94

Matrix: SOIL

Units: mg/Kg

Dilution factor: 1

COMPOUND	SA	SR	MS	MS	MSD	MSD	RPD	QC LIMITS	
	mg/Kg	mg/Kg	mg/Kg	PR	mg/Kg	PR		RPD	PR
DIESEL	20	0	16	80	15	75	7	25	50-150

MS = Spike sample  
MSD = Spike sample duplicate  
SR = Sample result  
SA = Spike added

NC = Not calculated

\*\* = Out of limits

$$RPD = 100 \times (MS - MSD) / ((MS + MSD) / 2)$$

$$PR = 100 \times ((MS \text{ or } MSD) - SR) / SA$$

QUALITY CONTROL RESULTS SUMMARY  
FOR DIESEL ANALYSIS

DIESEL  
QC sample No.: BLANK SPIKE & DUP      Date analyzed: 09-23-94

Matrix: SOIL

Units: mg/Kg

Dilution factor: 1

COMPOUND	SA	SR	MS	MS	MSD	MSD	RPD	QC LIMITS (ADVISORY)	
	mg/Kg	mg/Kg	mg/Kg	PR	mg/Kg	PR		RPD	PR
DIESEL	20	0	17	85	17	85	0	25	50-150

MS = Spike sample  
MSD = Spike sample duplicate  
SR = Sample result  
SA = Spike added

NC = Not calculated  
\*\* = Out of limits

$$RPD = 100 \times (MS - MSD) / ((MS + MSD) / 2)$$

$$PR = 100 \times ((MS \text{ or } MSD) - SR) / SA$$

# **Appendix B**

**Certified Analytical Reports**

**Chain of Custody Documentation**

# Hull Development Labs

1149 Minnesota Ave., San Jose, CA 95125 Tel: (408) 287-1777 Fax: (408) 287-1786

## Chain of Custody/Analysis Work Order

Client: Remediation Risk Mgmt. (RRM)

Project ID: 1438 Capitola Rd.

Address: PO Box 1362

Purchase Order #:

Contact: Chris Peoples

Telephone #: 408-662-6411

Date Received: 9/2/94

Due Date: Please call Mr. Chris Peoples immediately to establish turnaround time.

**LAB USE ONLY**

Samples arrived chilled and intact:

Yes  No

Notes: \_\_\_\_\_

Sample Information										Requested Analysis			
Lab #	Sample ID	Grab/Composite	Matrix	Date Collected	Time Collected	Pres.	Sample Container	TOH	TOG				
AS230	#1 - east		SOIL	9/2/94	1150		None ↑						
AS231	#1 - north				1150		SS Liner						
AS232	#1 - south				1150								
AS233	#1 - west				1150								
AS234	#1 - bottom				1450								
AS235	#2 - north				1450								
AS236	#2 - south				1450								
AS237	#2 - east				1450								
Relinq. By: <u>[Signature]</u>										Received By: <u>EW King</u>		Date: <u>9-6-94</u>	Time: <u>1:30</u>
Relinq. By:										Received By:		Date:	Time:
Relinq. By:										Received By:		Date:	Time:

# Hull Development Labs

1149 Minnesota Ave., San Jose, CA 95125 Tel: (408) 287-1777 Fax: (408) 287-1786

## Chain of Custody/Analysis Work Order

Client: RRM  
 Address: Pc Box 1362  
Aptos, CA. 95011  
 Contact: Chris Peoples  
 Telephone #: 408-662-9411  
 Date Received: \_\_\_\_\_  
 Due Date: [Signature]

Project ID: 1438 Capitola Rd.  
 Purchase Order #: \_\_\_\_\_

### LAB USE ONLY

Samples arrived chilled and intact:  
 Yes  No   
 Notes: \_\_\_\_\_

Sample Information							Requested Analysis							
Lab #	Sample ID	Grab/Composite	Matrix	Date Collected	Time Collected	Pres.	Sample Container	TH	diesel	TOG				
A5238	COMPOSITE - SP#14 SP#2		Soil	9/2/94	1920		Brass liner	X		X				
Relinq. By:	<u>[Signature]</u>						Received By:	<u>[Signature]</u>						
Relinq. By:							Received By:							
Relinq. By:							Received By:							
								Date	9-6-94			Time	1:30	
								Date				Time		
								Date				Time		

